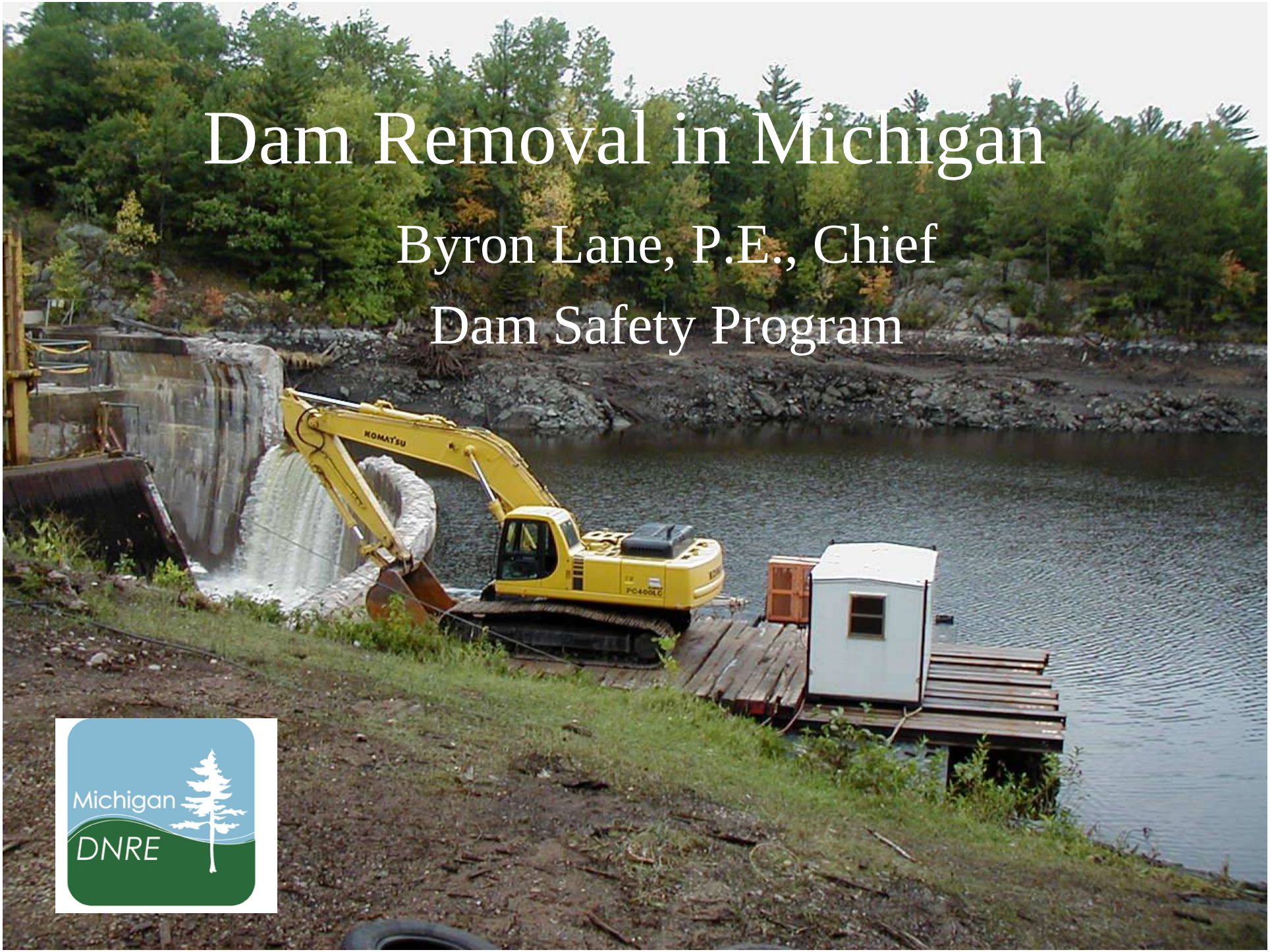
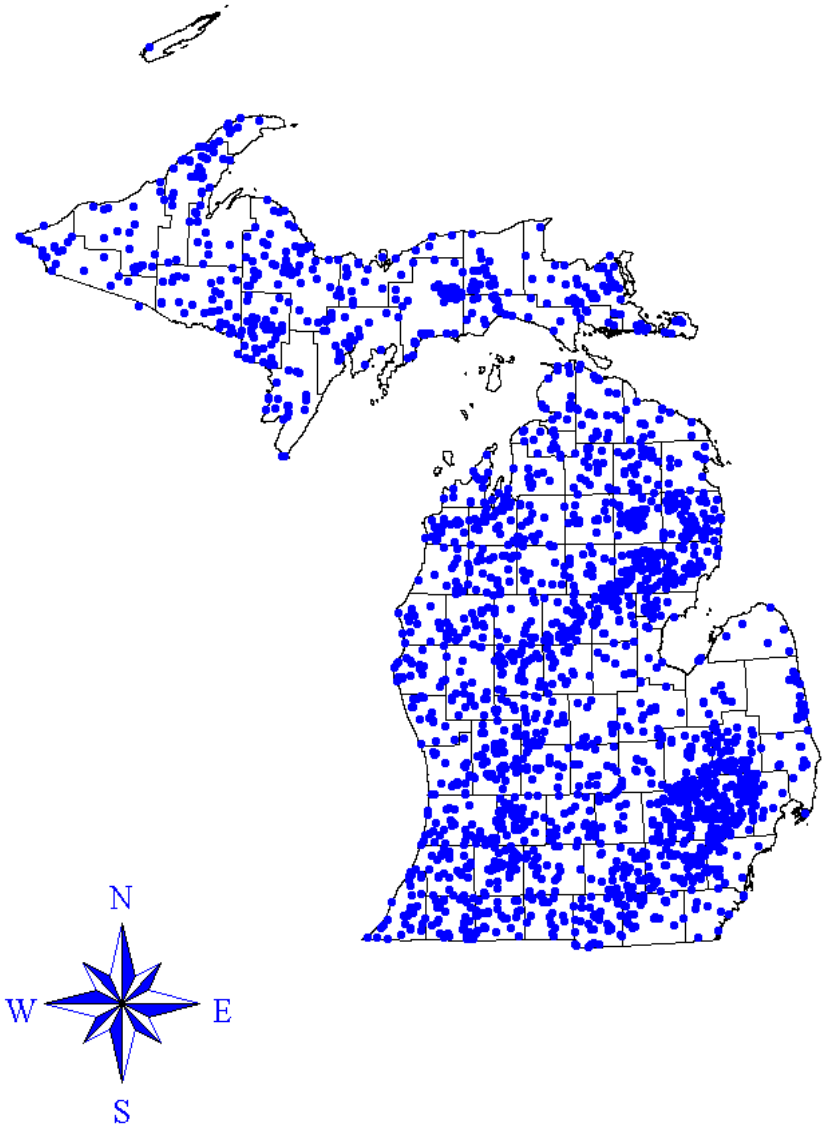
Dam Removal in Michigan

Byron Lane, P.E., Chief
Dam Safety Program



Michigan DNRE

Michigan Dams



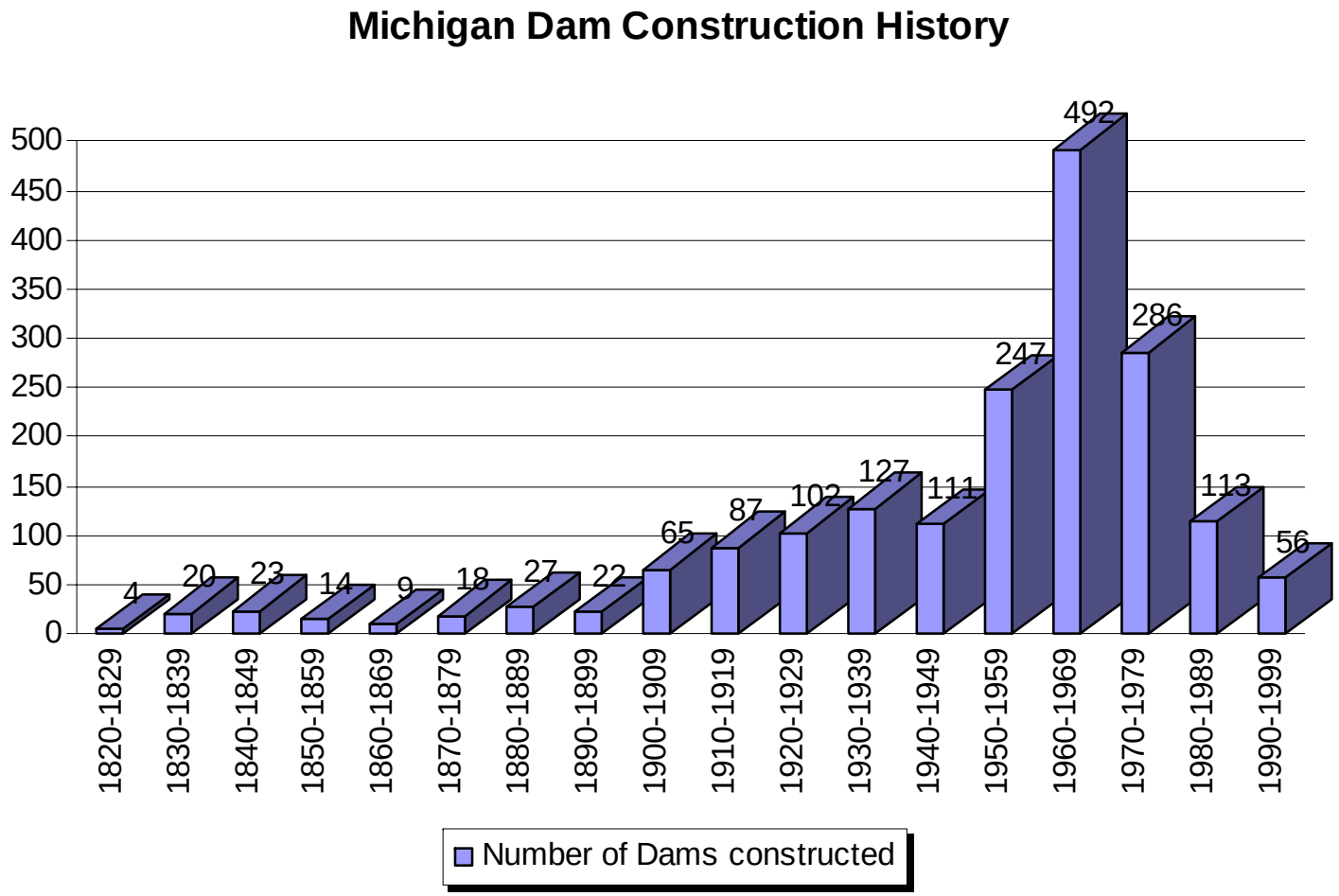
Recreation

Hydropower

Industry

Flood Control

Water Supply


Michigan Dam Construction History
500
450
400
350
300
250
200
150
100
50
0
4
20
23
14
9
18
27
22
65
87
102
127
111
247
492
286
113
56
1820-1829
1830-1839
1840-1849
1850-1859
1860-1869
1870-1879
1880-1889
1890-1899
1900-1909
1910-1919
1920-1929
1930-1939
1940-1949
1950-1959
1960-1969
1970-1979
1980-1989
1990-1999
Number of Dams constructed

HOME PRESS VIDEO

2009 Michigan Infrastructure Report Card

ASCEMI
American Society of Civil Engineers Michigan Section

NOT MAKING THE GRADE.

Michigans Infrastructure GPA = D

CONTACT
ANDREA FISCHER
THE ROSSMAN GROUP
920 N. WASHINGTON
LANSING, MI 48906
PHONE: (517) 487-9320

The ASCEMI Report Card is an assessment by professional engineers of the state's status in nine categories of infrastructure.

Michigan's infrastructure is in dire condition. Reversing the decay of our most valuable assets is essential to reviving Michigan's fortunes.

DOWNLOAD THE FULL REPORT

ASCEMI WEBSITE

FOR MORE INFORMATION ABOUT ASCEMI & CONTACT US ABOUT THE REPORT CARD, VISIT OUR WEBSITE - CLICK HERE.

AVIATION

GRADE C

Michigan's 200+ airports generate $4.3 billion for Michigan's economy each year. The individual components - runway systems, pavement conditions, terminals, weather access, security and pilot and aircraft services - are in satisfactory condition. However, current infrastructure repair, maintenance and expansion needs exceed $1.3 billion over the next five years, a figure well beyond existing revenue. It is imperative that Michigan establish dedicated funding for airport infrastructure.

REPORT

DAMS

GRADE D

Over 90% of Michigan's 2,581 dams will reach or exceed their design life by 2020. Many dams are abandoned, no longer serve any useful purpose, and pose safety hazards to downstream residents. No funding is currently available in Michigan to help dam owners repair, or remove aging dams.

REPORT

Repair/Removal Costs

- Dam repair is often expensive.
- Financial assistance is rarely available for dam repair.

Below is a "close up" of the photo above, showing what many believe to be the likeness of Jimmy Hoffa appearing in the falls of the water. He appears to be a "crying out" to be freed from his watery tomb.

The City of Corunna has agreed to provide the FBI whatever assistance and cooperation is necessary. Although historic, permission has been granted for the FBI to destroy the existing structure in their search efforts. The city has asked only that the FBI, at the completion of their search, construct a new dam on this same site. City officials estimate that this search can be performed for under two million dollars.

Repair/Removal Costs

- Dam repair is often relatively expensive.
- Financial assistance is rarely available for dam repair projects.
- Dam removal is often less expensive than dam repair and continued operation.
- Funding is often available to assist with river restoration projects.

Dam Impacts

Increase Water Temperature

Water Quality

- Nutrients accumulate in impoundments
- Respiration and decay of vegetation can result in dissolved oxygen declines
- Warming temperature in the summer – additional impact on DO

Dams fragment habitat for multiple species

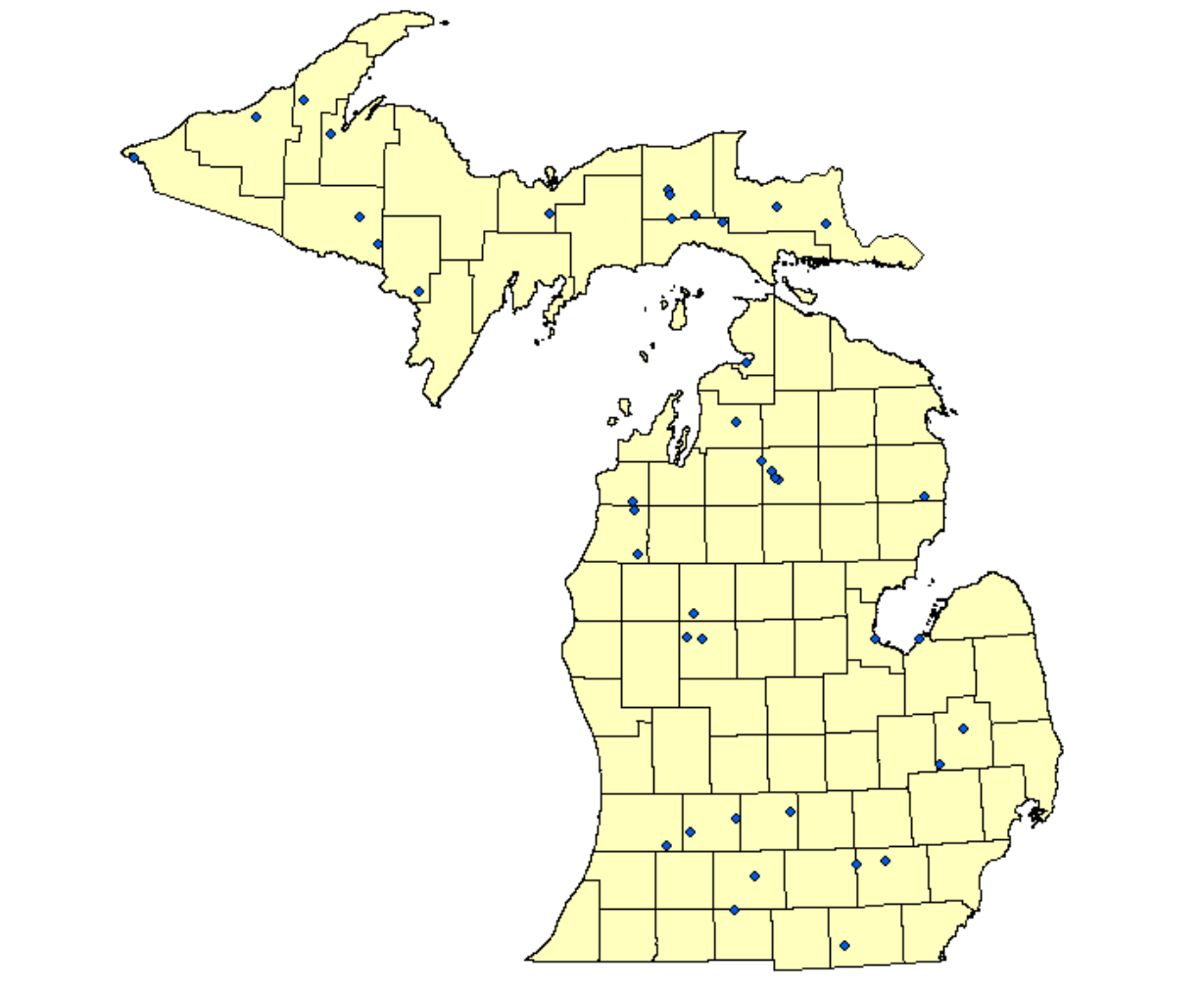
CONNECTIVITY OF A RIVER

Normal Flow

SLIDE MODIFIED FROM:
Aadland, MN DNR and Wildman, American Rivers

Public Safety

Removed Dam (41)



Sturgeon River Dam, Dickinson Co.

Sturgeon River Dam, After

Chesaning Dam, Saginaw County

Stinking mud flats?

FUDEQ
NO
TRESPASSING

Boardman Pond Property Owners
565 Boardman View Drive
Traverse City, MI 49686
Phone: 231-946-5434 / Fax: 231-946-5444

May 3, 2007

Mr. Steven Chester, Director
Michigan Department of Environmental Quality
P.O. Box 30473
Lansing, MI 48909-7973

Re: Emergency Draw Down of Boardman Pond and
File #06-28-68-P for Permanent Draw Down

Via Facsimile: 517-241-7401

Dear Director Chester:

I am writing you today on behalf of all property owners and citizens of standing and interest on and around the Boardman Pond (also referred to as the Keystone Pond), which is the backwater of the Boardman Dam, on the Boardman River, just south of Traverse City, in Garfield and Blair Townships of Grand Traverse County. I will attempt to be brief and concise in my comments, so that you can have a grasp of the situation and that actions ca initiated to prevent further damage.

A brief history: On or about March 14, 2007, a leak was discovered in the Boardman Dam and an emergency declared, thus prompting Grand Traverse County and Traverse City Light and Power (TCLP) to initiate an imme three (3) foot draw down of the Boardman Pond. As it turns out, this was nothing more than an old pipe, which

Jennifer M. Granholm
Governor of
The Great State of Michigan
&
Steven E. Chester
Director MDEQ

June 18, 2007

Dear Governor and Director Chester:

Subject: MDEQ file No. 06-28-0068-P Boardman Dam Draw Down by Grand Traverse County and Traverse City Light and Power.

Today 4000 cars and trucks will cross the Dam at Cass & Keystone. No County Road Commission Engineers have declared the Structure unsafe. No Engineering Company has declared the Dam to be unsafe and in danger of collapse or failure. The Dam may have merely fallen out of specification and rule in the event of a 200 year flood event. The record clearly shows that the Dam is safe enough.

Concerned property owners have field an administrative appeal through the Office of Administrative Hearing. Other property owners are attempting to file a temporary Court injunction to stop the draw down until the administrative appeal can be heard.

Administrative Law Judge Richard A. Patterson has recommended that the aggrieved Keystone pond property owners attempt to work informally with the MDEQ to identify and possible find solutions or resolution before continuing with a costly APA Hearing.

The property owners are requesting under authority granted to the State of Michigan in

Dave Hamilton
Byron Lake
File
Boardman
Grand Traverse Co
6/15/07
ID 5/2

STATE OF MICHIGAN
STATE OFFICE OF ADMINISTRATIVE HEARINGS AND RULES

In the matter of

Edwin Martel et al on the permit issued to Traverse City Light and Power
_____/

File No.: 06-28-0068-P

Part: 301, Inland Lakes and Streams

Agency: Department of Environmental Quality

Case Type: Land and Water Management Division

RECEIVED
JUN 15 2007
ENVIRONMENTAL QUALITY
LAND & WATER MANAGEMENT

Issued and entered
this 12th day of June, 2007
by Richard A. Patterson
Administrative Law Judge

RECEIVED
JUN 15 2007
ENVIRONMENTAL QUALITY
LAND & WATER MANAGEMENT DIV.

NOTICE OF OPENING NEW FILE

6. A feasible and prudent alternative to the drawdown does not exist. MCL 324 30311(4)(b); 2000 MR 6, R 281 922(a).

7. The drawdown has not caused an unacceptable disruption to aquatic resources. MCL 324 30311(4).

PROPOSAL FOR DECISION

Based upon the Findings of Fact and Conclusions of Law, it is proposed the Final Order be entered allowing a permit as issued.

EXCEPTIONS

The parties have until **February 27, 2009**, to file written Exceptions to the PFD. Those filings shall comport with § 81 of the Administrative Procedures Act. MCL 24.281(1). Director Steven E. Chester will issue the Final Determination and Order in this case after the filing date. These filings shall be sent to: Richard A. Patterson, State Office of Administrative Hearings and Rules, Constitution Hall, South Tower Atrium, 525 West Allegan Street, P.O. Box 30473, Lansing, Michigan 48909-7973.

Dated: January 13, 2009

Richard A. Patterson
Administrative Law Judge

CONCLUSION

In light of the analysis set forth above, the Court affirms the ALJ's decision.

ORDER

IT IS HEREBY ORDERED that the ALJ's decision is **AFFIRMED**.

This order resolves the last pending claim and closes this case.

Dated: February 4, 2010

Hon. Paula J.M. Manderfield (P-34319)
Circuit Court Judge

Boardman River Dams: Episode 1

Drawdown and Devastation in Grand Traverse County

The latest Property Rights Network video relates the horrors experienced by property owners on the Boardman River outside Traverse City. Three of four dams on the river have been slated for removal. While removal of the dams may seem like a good idea, elected officials and bureaucrats are using every tool in their arsenal to usurp the rights of individuals who own land on the dam impoundments.

SHARE

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Keep me logged in | Forgot your password?

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Sign Up

SAVE THE CORUNNA DAM !/? is on Facebook

Sign up for Facebook to connect with SAVE THE CORUNNA DAM !/?

RSVP about your feelings on our options under the "Events" tab:
Attending = Like
Maybe Attending = Undecided
Not Attending = Dislike
You can change your preference at a future point if you desire.

Information

Category:
Common Interest - Current Events

Description:
What do you feel about a Corunna future with no Dam? The status quo has been upset... doing nothing appears to be a non-option. But what do we do? Stay tuned.

SAVE THE CORUNNA DAM !/?

Join

Wall | Info | Discussions | Photos | Video | Events

Basic Info

Name: SAVE THE CORUNNA DAM !/?

Category: Common Interest - Current Events

Description: What do you feel about a Corunna future with no Dam? The status quo has been upset... doing nothing appears to be a non-option. But what do we do? Stay tuned.

Privacy Type: Open: All content is public.

Contact Info

Location: Corunna, MI

Recent News

News: The Michigan Department of Natural Resources and Environment has issued an order to draw-down and repair the dam. Easier said than done... The city is working with the state to address concerns that a draw-down may actually increase hazards, and to develop a long-term solution. Your opinions and ideas are valuable. Natural restoration, fish migration, recreational water, cost, grants available, rapids, water levels, flooding, safety, maintenance, history and aesthetics are just a few of the variables in making a good decision. What-ever happens, not everyone will like the outcome.

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Save Argo Pond! is on Facebook

Sign up for Facebook to connect with Save Argo Pond!

Save Argo Pond!

Join

Wall | Info | Discussions | Photos

Bob Roether What's the next move politically?

December 20, 2009 at 7:54pm · Comment · Like · Report

S. Khai Mong

The Ballad of Argo Dam | Pioneer Crew

www.pioneercrew.org

This is the ballad of Argo DamWe sure ought to keep it if we canThere it sits, as good as newbuilt in 1972By Joe O'Neal construction(thank you Joe...waita go!)

November 7, 2009 at 5:16am · Comment · Like

Kathryn Deering

Save Argo Pond signs

Where are people getting the Save Argo Pond signs to put out on their lawns?

August 27, 2009 at 11:33am · Participate

Joe Partington I'm in! Save the pond!

July 28, 2009 at 8:41pm · Report

Information

Category:

Sports & Recreation - Outdoor Sports

Description:

For anyone who has ever walked along side, rowed upon, or stopped to appreciate the beautiful, calm water of Argo Pond. Preserve Ann Arbor's most beautiful and historic body of water!

Privacy Type:

Open: All content is public.

Admins

Supporters of keeping Argo Dam and Argo Pond, namely the rowing community, showed up en masse for tonight's meeting.

Ryan J. Stanton | AnnArbor.com

Huron River Watershed Council

Protecting the River Since 1965

Home | About | Our Work | The River | Volunteer | Donate | Events | Take Action | Publications

Remove Argo Dam

Why remove Argo Dam?

It's better for the river

Cleaner, healthier water. Better habitat for fish and wildlife. Natural control of invasive species. Flood control. Read our science brief.

It's a great quality-of-life opportunity

30 acres of brand-new parkland in the heart of Ann Arbor. Beautiful natural rapids. Better canoeing, kayaking, fishing—even tubing! Revitalization of the northern

FAST FACT ABOUT THE HURON RIVER: Removal of the Argo Dam will result in a gain of 30 acres of parkland for the City of Ann Arbor (as well as the associated

Newsletter Sign Up

Huron River Report

Email Address:

Sign Up

Join

Millers Creek Film Festival

Potential Environmental and Resource Issues

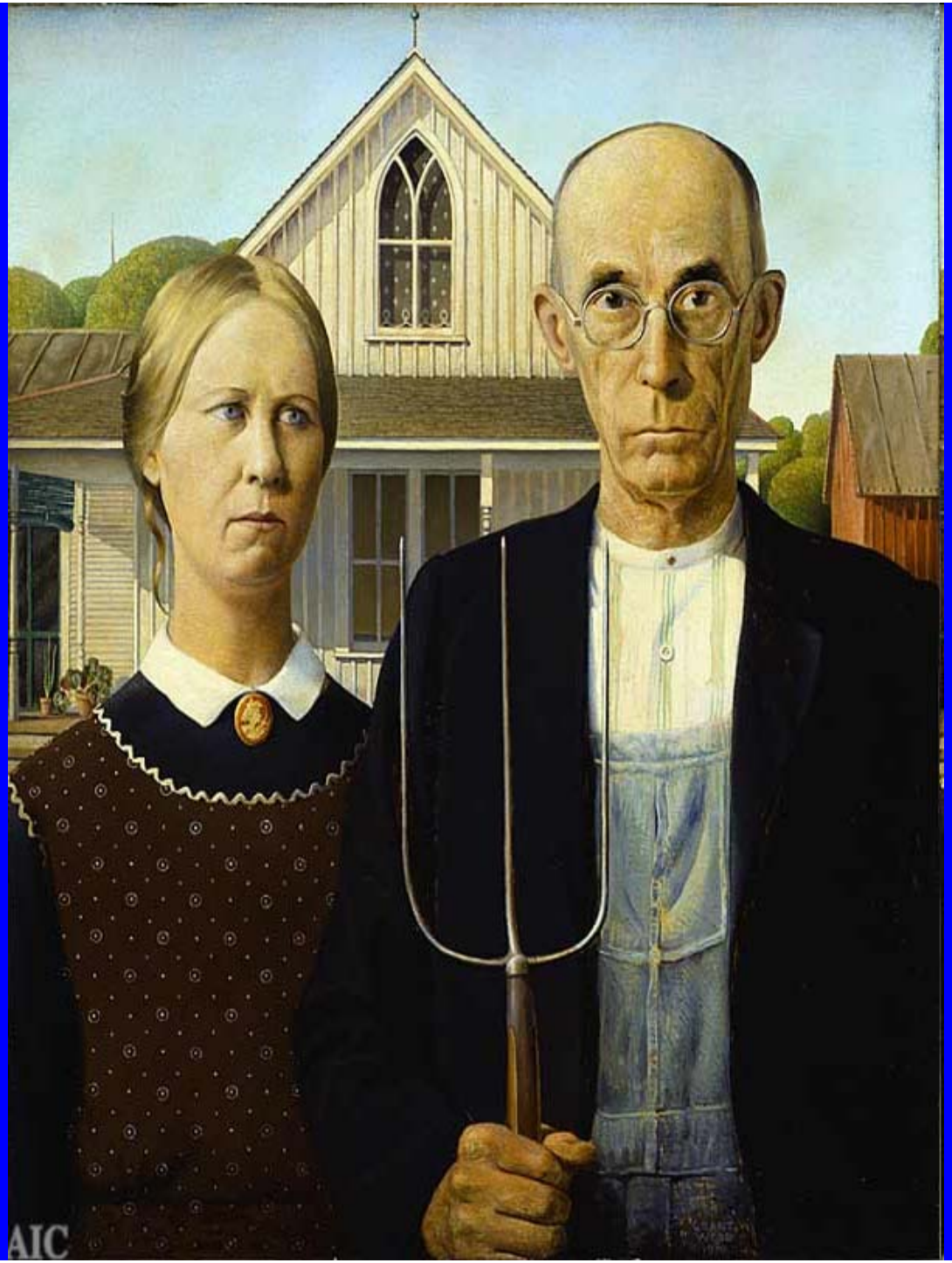
- Sediment Quantity
- Sediment Quality
- Fish/Aquatics
- Channel Relocation
- Invasive Species
- Wetland Impacts
- Bridge Scour
- Flooding
- Endangered Species

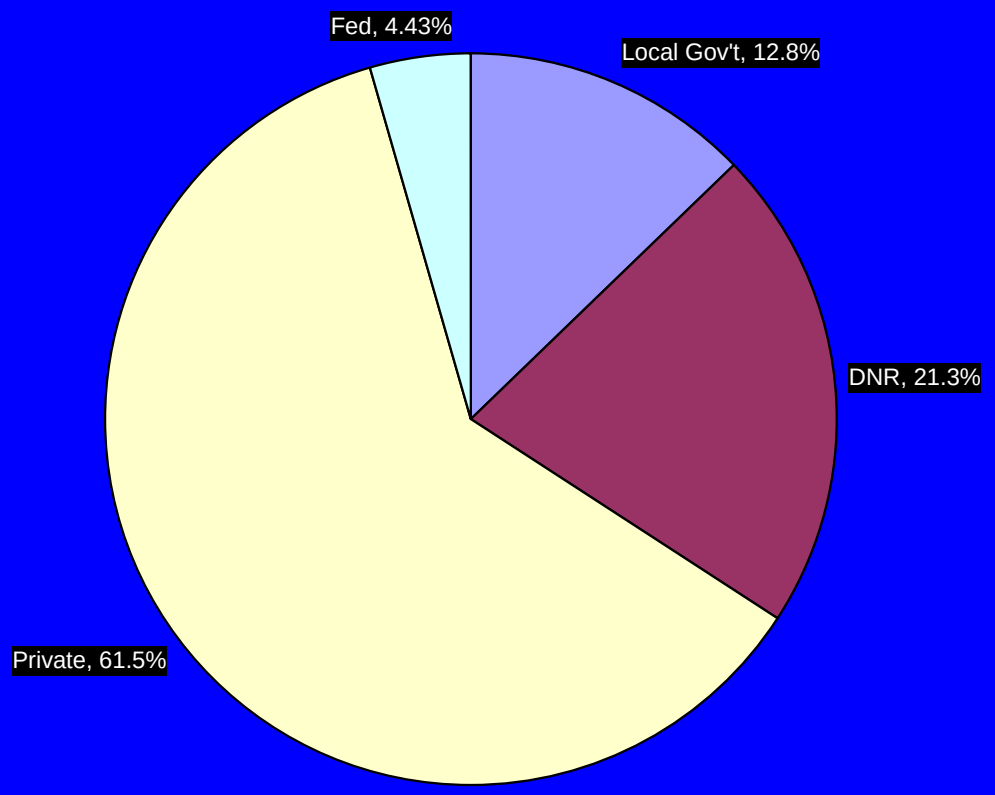
Statutes Potentially Involved

- Part 31, Water Resources Protection (Floodplains and Water Quality)
- Part 111, Hazardous Waste Management
- Part 115, Solid Waste Management
- Part 201, Environmental Remediation
- Part 301, Inland Lakes and Streams
- Part 303, Wetlands Protection
- Part 315, Dam Safety
- Part 365, Endangered Species Protection

Organizations Potentially Involved

- DNRE Fisheries Division
- DNRE Land and Water Management Division (three program areas)
- DNRE Remediation and Redevelopment Division
- DNRE Waste and Hazardous Material Division
- DNRE Water Bureau
- Michigan Department of Transportation


AIC


Ownership Type
Fed, 4.43%
Local Gov't, 12.8%
DNR, 21.3%
Private, 61.5%

POLICIES AND MEASURES THAT CAN BE TAKEN TO ADDRESS DEGRADING DAMS IN MICHIGAN

May 11, 2004

Prepared by:

Byron P. Lane, P.E., Chief
Dam Safety Program
Geological and Land Management Division

Voluntary Dam Removal Pilot Project

May 12, 2004

Prepared by
Dam Safety Program
Water Management Section
Geological and Land Management Division
Byron Lane, P.E., Chief
James Pawloski, P.E.
James Hayes. P.E.
Paul Wessel, P.E.

Provide Project Management Assistance

"Another partial solution to the problem is to aid owners in their efforts to find private funding and to navigate the DEQ permitting process. "

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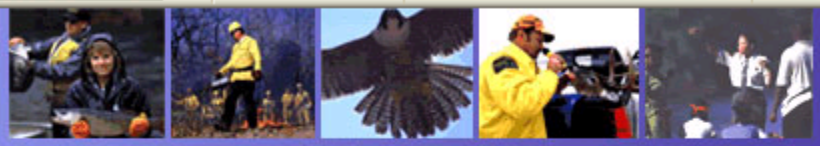
http://www.michigan.gov/dnr/0,1607,7-153-10364_27415---,00.html Go Links

Go Bookmarks 3 blocked Check AutoLink AutoFill Send to Settin



Department of Natural Resources

Michigan.gov
The Official State of Michigan Website

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ing
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- llife Action Plan

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- Enforcement
- sts, Land & Water
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- llife & Habitat
- s & Leases
- cation & Outreach
- lications & Maps
- mmissions, Boards ommittees

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Overview

- History of Michigan's Dams
  Dams have been built and rebuilt across Michigan to meet a variety of needs that reflect the evolution of the State's economy and society over the decades.
- Dams in Michigan
  Maps of Michigan dams.
- Environmental Impacts of Dams
  Protection and restoration of river environments is essential for sustainable, diverse, and productive stream fisheries. Over the last two decades, fisheries managers and ecologists have explored the changes dams cause in the ecological processes of river environments.
- Regulation of Dams

Great Lakes, Great Times, Great Outdoors

- Dam Removal Guidelines for Owners PDF
  The purpose of this guidance document is to suggest issues that may need to be considered when deciding the future of a dam, and to assist in implementing a dam removal project.
- Dam Removal
  Most dams in Michigan were built decades ago and many have deteriorated due to age, erosion, poor maintenance, flood damage, and poor designs. Those dams that no longer make sense, that stand in disrepair, or are not removed are at significant risk of failure, particularly during high flow events.

Dams Removed in MI

- Big Rapids Dam
- Stronach Dam

Funding Sources

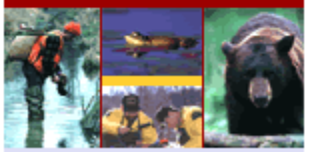
- Grant Sources
- Paying for Dam Removal PDF

Departments/Agencies
Online Services
Surveys
RSS Feeds

Quick Links

- Citizens Committee for State Parks
- Land Use Permits
- Grants
- Contact the DNR
- State of Michigan Vacancy Postings
- Recreational Safety Classes
- Natural Resources Commission
- Press Releases
- Voter Registration PDF
- Waterways Commission
- Land Consolidation Strategy
- Laws and Legislation

DNR Stories and Photos



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Michigan Dams

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Discussions

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American Rivers will soon release our new DVD "Restoring America's Rivers: Preparing for the Future."
By Stephanie Lindloff 6 hours ago
Follow discussion | Add comment »

Does anyone know if the Forest Lake dam in Arenac County (Alger area) is considered a high hazard dam?
By Roger Garner 14 days ago
Stop following | 3 comments »

Start a discussion | My discussions | More »

News

Most Activity | Latest News

Dam bid awarded — at $160,000 under budget | SouthCoastToday.com
From: southcoasttoday.com | 14 views | March 29, 2010 | Follow discussion | Share | See 2 comments »

> The true fact is that Right now any one interested in any type of construction or demolition is faced with a fantastic opportunity. We are in one of the best BUYERS MARKETS in my lifetime and you...
> Comment posted 1 day ago by Mike Sarrazin

Alpena National Fish and Wildlife Conservation Office - Dept of the Interior...
From: recovery.doi.gov | 10 views | March 30, 2010 | Stop following | Share | See 2 comments »

Teen drowns, another one injured when canoe swept over low-head dam
From: kansascity.com | 9 views | March 25, 2010 | Stop following | Share | Add comment »

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Stephanie Lindloff started a discussion: **American Rivers will soon release our new DVD "Restoring America's Rivers: Preparing for the Future."**
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See all updates »

Updates: Last 7 Days

Stephanie Lindloff started a discussion: **American Rivers will soon release our new DVD "Restoring America's Rivers: Preparing for the Future."**
6 hours ago · Add comment

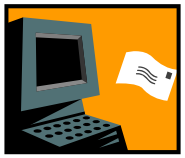
Byron Lane recommends reading: **Forge Pond Dam In Danger Of Collapse After Days Of Heavy Rain In Freetown - wbztv.com - wbztv.com**
8 hours ago · Start discussion

Andrea Ania has joined the group.
1 day ago · Send message

Stephanie Lindloff recommends reading: **Torpedo the dams — to prevent more floods - The Boston Globe - boston.com**
1 day ago · Start discussion

Mike Sarrazin commented on: **Dam bid awarded — at $160,000 under budget |**

Announcements



E-mail - In an effort to reduce mailing and handling costs, and to improve our ability to quickly disseminate dam safety information to you, we ask that you provide us with the e-mail address for the primary contact person for the dam. This can be most easily done by sending an e-mail note to egejm@michigan.gov providing the name of the primary contact and the ID number of the dam.

Dam Removal – The removal of unneeded dams is becoming increasingly popular around the country and around Michigan. Many of Michigan's 2500 dams have outlived their usefulness and have become costly maintenance headaches for their owners. If you are interested in looking into the possibility of removing your dam, visit our website at www.michigan.gov/deqdamsafety or the Department of Natural Resources' website at www.michigan.gov/dnrdams for helpful information on dam removal and a listing of possible funding sources.

Byron Lane, P.E., Chief
Dam Safety Program
Michigan Department of Environmental Quality
laneb@michigan.gov
517-241-9862

Practical course focusing on all aspects of dam removal

Succeeding with a Dam Removal Project

November 5–7, 2007
East Lansing, Michigan

Benefits for:

- ✓ *Design engineers and planners*
- ✓ *Biologists*
- ✓ *Regulatory review professionals*
- ✓ *Dam owners*
- ✓ *Contractors/contracting service personnel*
- ✓ *Public sector professionals*

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THE UNIVERSITY of WISCONSIN MADISON

Department of Engineering Professional Development
432 North Lake Street Madison, Wisconsin 53706

Succeeding wit a Dam Removal Project

November 5–7, 2007
East Lansing, Michigan

- Identify key decision points
- Implement practical, efficient d removal approaches
- Know how to maximize environmental endpoints
- Understand engineering, sedim management and water quality issues

By invitation of and in cooperation with:

American Rivers
Michigan Water Environment Association
Michigan Chapter of the American Fisheries So
Michigan Association of Conservation Districts
Michigan Department of Environmental Quality
Michigan Council of Trout Unlimited

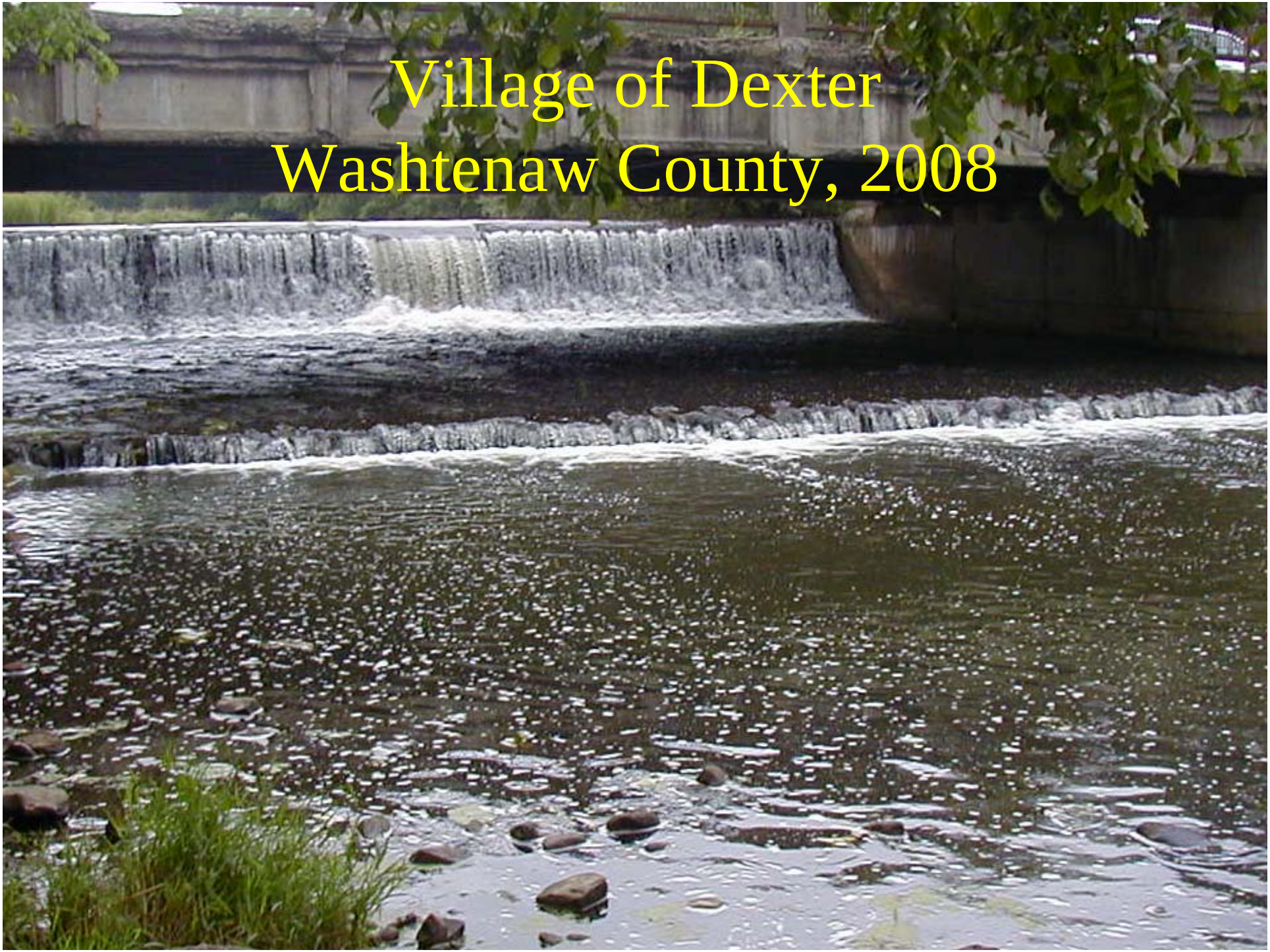
Dam Removal Application Shepherding Concept

- Dam Safety Program staff issues dam removal permit and coordinates permit processing.

Diamondale Dam, Eaton Co.

MacKENZIE CO

Removed 2006


Village of Dexter
Washtenaw County, 2008

Village of Dexter Dam Removal Project

1. Consultant for owner contacted DEQ and asked for project input – 8/06
2. DEQ and DNR staff met with owner and consultant's staff at dam site – 8/06

URS

DATE _____
PROJECT NO. _____
PAGE NO. ____ OF ____ BY _____

Mill Creek Dam Removal Project

Permitting Requirements Meeting - 8/24/06

Attendees

Name	Affiliation	Phone	Email
Mike Donahue	URS	248.994.7431	michael_donahue@urscorp.com
Mike Tarazi	URS	616-574-8381	mike_tarazi@urscorp.com
JAN HAUSER	URS	248-994-7438	jan.hauser@urscorp.com
SHERRY SLOCUM	URS	(616) 560-5245	sherry-slocum@urscorp.com
Dan Rockafellow	MDEQ	517-335-4191	rockafed@michigan.gov
James Sallee	MDEQ	517-780-7910	salleej@michigan.gov
Mary Vanderlaan	MDEQ	517-780-7915	vanderlm@michigan.gov
Mitch Adelman	DEQ	517-780-7852	adelmanm@michigan.gov
Jeff Braunscheidel	MDNR-Fisheries	248-359-9048	braunscj@michigan.gov
Debora Snell	MDEQ	517-780-7929	snelld@michigan.gov
Laura Rubin	HRWC	734.769.5123	lrubin@hrwc.org
John Hanifan	Village of Dexter	" 426-8307	jhanifan@villageofdexter.org
SCOTT BELL	LTI / VILLAGE OF DEXTER	734.332-1200	sbell@cim.no
BYRON LANE	MDEQ / DAM SAFETY	517-241-9862	LANEB@MICHIGAN.GOV
PAUL WESSEL	MDEQ / DAM SAFETY	517 335-6748	wesselpt@michigan.gov
Paul Cousins	Village of Dexter	734-426-4765	millpond89@comcast.net
Jerry Fulcher	MDEQ - LWMD	517-335-3172	Fulcherg@michigan.gov

Village of Dexter Dam Removal Project

1. Consultant for owner contacted DEQ and asked for project input – 8/06
2. DEQ and DNR staff met with owner and consultant's staff at dam site – 8/06
3. DEQ staff worked with owner & consultant to address sediment, floodplain and other issues 2006 - 07.
4. Permit application submitted – 10/07
5. Public hearing - 1/08
6. Permit issued - 2/08

GEBS
MacKENZIE CO.

Village of Dexter Dam Removal Project

1. Consultant for owner contacted DEQ and asked for project input – 8/06
2. DEQ and DNR staff met with owner and consultant's staff at dam site – 8/06
3. DEQ WB, RRD & LWMD worked with owner & consultant to address sediment and other issues 2006 - 07.
4. Permit application submitted – 10/07
5. Public hearing - 1/08
6. Permit issued - 2/08
7. Project issues addressed by appropriate team members as they arose.
8. Dam removed - 2008

Dexter Dam - After

Others

- Buckies Pond Dam, Luce Co. – 2008
- Chesaning Dam, Saginaw Co. - 2009
- Rice Creek Dam, Calhoun Co. - 2009
- Nashville Dam, Barry County - 2009

Dam Removal *Team* Concept

- Dam Safety Program staff issues dam removal permit and coordinates permit processing.
- Appropriate staff meet with owner early in the design process.
- Establishment of an informal dam removal core team with representatives of each organization.
- Team members are consulted when questions arise related to a dam removal project.

Future

- Creation of a formal standing dam removal team.

Questions?